1970-72 Chevrolet Chevelle / Monte Carlo

with **Factory Air**
Gen 5 Evaporator Kit
(564285)

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Packing List: Evaporator Kit (564285)

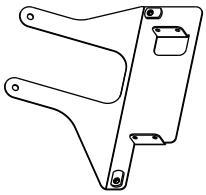
No.	Qty.	Part No.	Description
1.	1	765200	Gen 5 Super Magnum Module
2.	1	784285	Accessory Kit

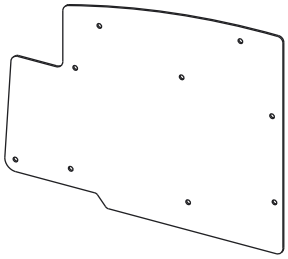
**** Before beginning installation, open all packages and check contents of shipment. Please report any shortages directly to Vintage Air within 15 days. After 15 days, Vintage Air will not be responsible for missing or damaged items.**

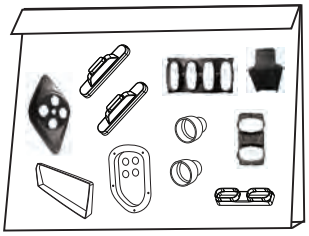
1

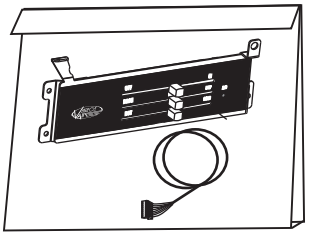
Gen 5 Super Magnum Module 765200

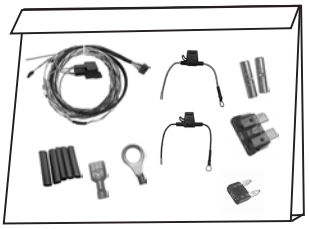
2

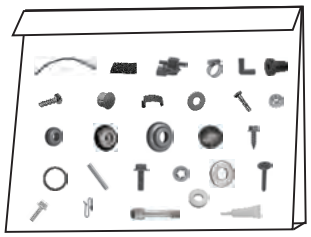












Accessory Kit 784285

NOTE: Images may not depict actual parts and quantities. Refer to packing list for actual parts and quantities.

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Important Notice—Please Read

For Maximum System Performance, Vintage Air Recommends the Following:

NOTE: Vintage Air systems are designed to operate with R134a refrigerant only. Use of any other refrigerant could damage your A/C system and/or vehicle, and possibly cause a fire, in addition to potentially voiding the warranties of the A/C system and its components.

Refrigerant Capacities:

Vintage Air System: 1.8 lbs. (28.8 oz.) or 816 grams of **R134a**, charged by weight with a quality charging station or scale. **NOTE: Use of the proper type and amount of refrigerant is critical to system operation and performance.**

Other Systems: Consult manufacturer's guidelines.

Lubricant Capacities:

New Vintage Air-Supplied Sanden Compressor: No additional oil needed (Compressor is shipped with proper oil charge).

All Other Compressors: Consult manufacturer (Some compressors are shipped dry and will need oil added).

Safety Switches

Your Vintage Air system is equipped with a binary pressure safety switch. A binary switch disengages the compressor clutch in cases of extreme low pressure conditions (refrigerant loss) or excessively high head pressure (406 PSI) to prevent compressor damage or hose rupture. A trinary switch combines Hi/Lo pressure protection with an electric fan operation signal at 254 PSI, and should be substituted for use with electric fans. Compressor safety switches are extremely important since an A/C system relies on refrigerant to circulate lubricant.

Service Info:

Protect Your Investment: Prior to assembly, it is critical that the compressor, evaporator, A/C hoses and fittings, hardlines, condenser and receiver/drier remain capped. Removing caps prior to assembly will allow moisture, insects and debris into the components, possibly leading to reduced performance and/or premature failure of your A/C system. This is especially important with the receiver/drier.

Additionally, when caps are removed for assembly, **BE CAREFUL!** Some components are shipped under pressure with dry nitrogen.

Evacuate the System for 35-45 Minutes: Ensure that system components (Drier, compressor, evaporator and condenser) are at a temperature of at least 85°F. On a cool day, the components can be heated with a heat gun ***or*** by running the engine with the heater on before evacuating. Leak check and charge to specifications.

Bolts Passing Through Cowl and/or Firewall:

To ensure a watertight seal between the passenger compartment and the vehicle exterior, for all bolts passing through the cowl and/or firewall, Vintage Air recommends coating the threads with silicone prior to installation.

Heater Hose (not included with this kit):

Heater hose may be purchased from Vintage Air (Part#31800-VUD) or your local parts retailer. Routing and required length will vary based on installer preference.

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Important Wiring Notice—Please Read

Some vehicles may have had some or all of their radio interference capacitors removed. There should be a capacitor found at each of the following locations:

1. On the positive terminal of the ignition coil.
2. If there is a generator, on the armature terminal of the generator.
3. If there is a generator, on the battery terminal of the voltage regulator.

Most alternators have a capacitor installed internally to eliminate what is called “whining” as the engine is revved. If whining is heard in the radio, or just to be extra cautious, a radio interference capacitor can be added to the battery terminal of the alternator.

It is also important that the battery lead is in good shape and that the ground leads are not compromised. There should be a heavy ground from the battery to the engine block, and additional grounds to the body and chassis.

If these precautions are not observed, it is possible for voltage spikes to be present on the battery leads. These spikes come from ignition systems and charging systems, and from switching some of the vehicle’s other systems on and off. Modern computer-operated equipment can be sensitive to voltage spikes on the power leads, which can cause unexpected resets, strange behavior and/or permanent damage.

Vintage Air strives to harden our products against these types of electrical noise, but there is a point where a vehicle’s electrical system can be degraded so much that nothing can help.

Radio interference capacitors should be available at most auto and truck parts suppliers. They typically are cylindrical in shape, a little over an inch long and a little over a half-inch in diameter, and they have a single lead coming from one end of the cylinder with a terminal on the end of the wire, as well as a mounting clip which is screwed into a good ground on the vehicle. The specific value of the capacitance is not too significant in comparison to ignition capacitors that are matched with the coil to reduce pitting of the points.

- Care must be taken, when installing the compressor lead, not to short it to ground. The compressor lead must not be connected to a condenser fan or to any other auxiliary device. Shorting to ground or connecting to a condenser fan or any other auxiliary device may damage wiring or the compressor relay, and/or cause a malfunction.
- When installing ground leads on Gen 5 systems, the blower control ground and ECU ground must be connected directly to the negative battery post.
- For proper system operation, the heater control valve must be connected to the ECU.

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Engine Compartment Disassembly

NOTE: Before starting the installation, check the function of the vehicle (horn, lights, etc.) for proper operation, and study the instructions, illustrations, photos & diagrams.

Perform the Following:

1. Disconnect the battery.
2. Remove the battery and battery tray (retain).
3. Drain the radiator.
4. Evacuate the A/C system if necessary.
5. Remove the condenser and drier (discard) (See Figure 1, below).
6. Remove the A/C lines from the compressor to the evaporator (discard) (See Figure 1, below).
7. Remove the compressor and bracket (discard) (See Figure 1, below).
8. Remove the evaporator blower assembly (discard). **NOTE: To remove the evaporator and blower assembly (under hood) and the air distribution system (under dash), the factory manual recommends removing the passenger side inner fender.**
9. Remove the heater hoses, A/C hoses, hardlines and muffler (discard) (See Figure 1, below).
10. Remove the A/C and heater wiring/vacuum harness molded grommet (See Figure 1, below).
11. Install the supplied 1 ¾" plug in the firewall as shown in Figure 1, below.

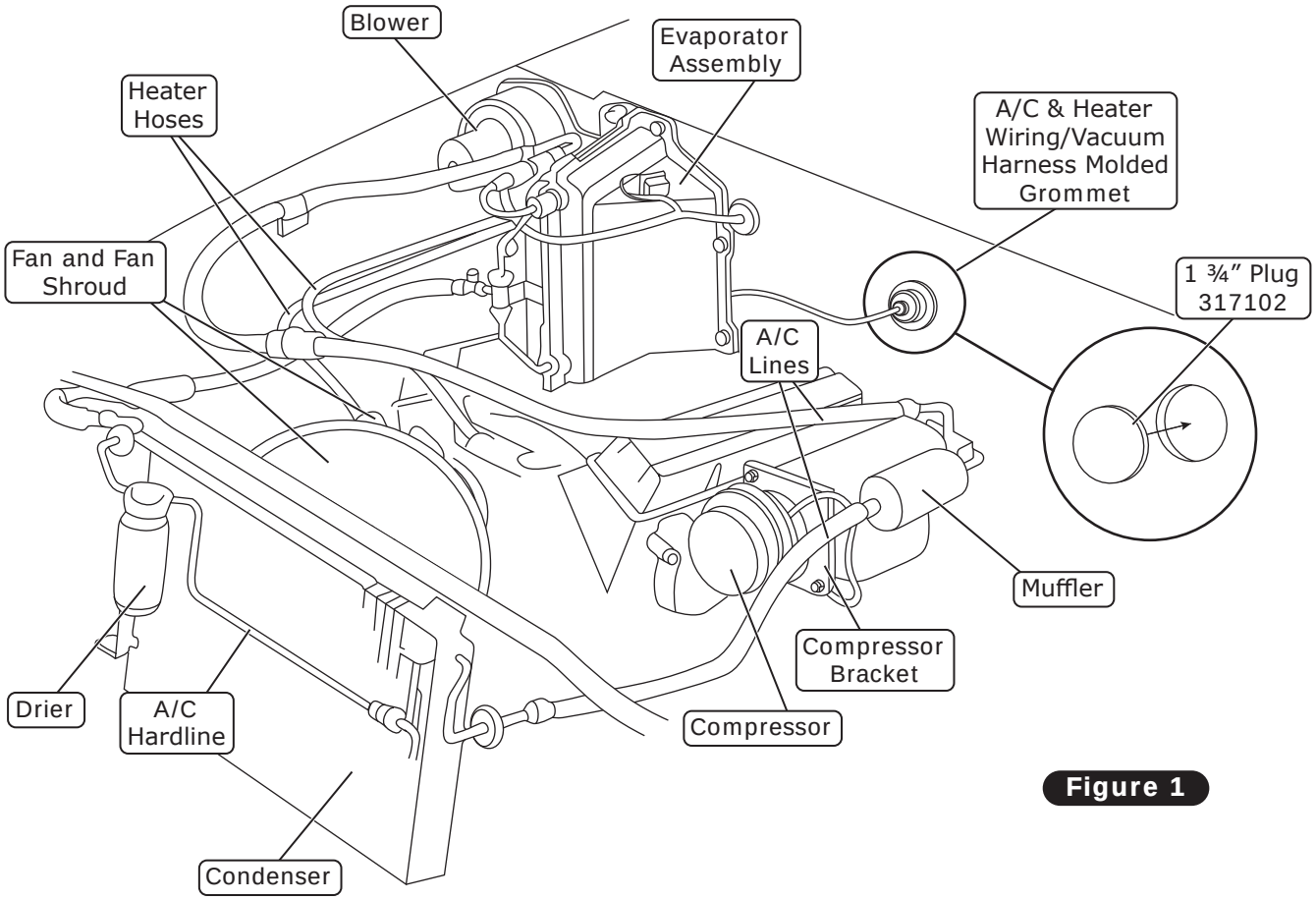

Figure 1

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Condenser Assembly and Installation

1. Refer to separate instructions included with the condenser kit to install the condenser.

2. Binary switch installation (Refer to condenser instructions).

Compressor and Brackets

1. Refer to separate instructions included with the bracket kit to install the compressor bracket.

Passenger Compartment Disassembly

NOTE: Removal of dashboard is required to install the evaporator. Vintage Air recommends using the factory service manual when disassembling and reassembling the dashboard.

Perform the Following:

1. Remove the dash pad by removing the (6) screws (retain) (See Figure 1, below).

2. Lower the steering column. Protect the steering column with a cloth.

3. Disconnect all wires and cables from the instrument panel, speedometer, control panel and radio.

4. Remove the lower dash by removing the (8) bolts (retain).

5. Remove all hoses and ducting from the louvers (See Figure 1, below).

6. Remove the (2) under dash louver assemblies (discard) (See Figure 1, below).

7. Remove the defrost duct assembly by removing the (4) screws (See Figure 2, below).

8. Remove the A/C and heater assembly (discard) (See Figure 2, below).

9. Remove the passenger side kick panel/fresh air door assembly as shown in Figures 3 & 4, below.

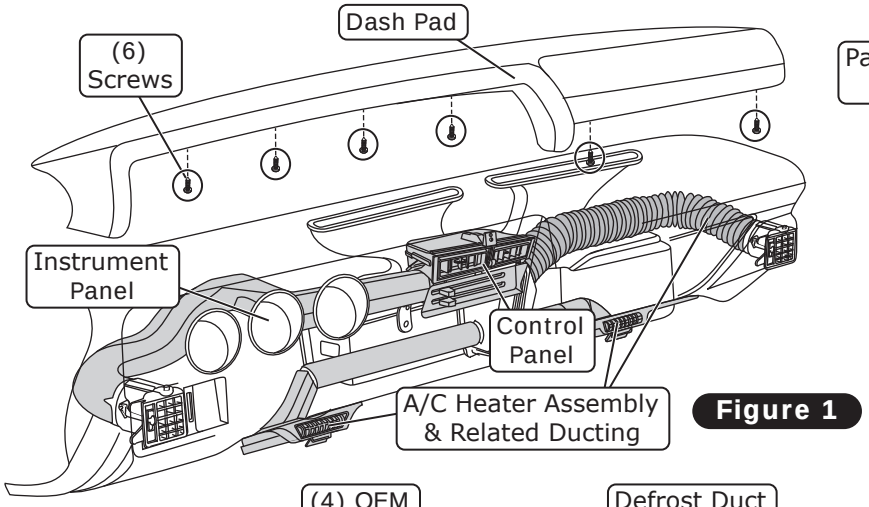

Figure 1

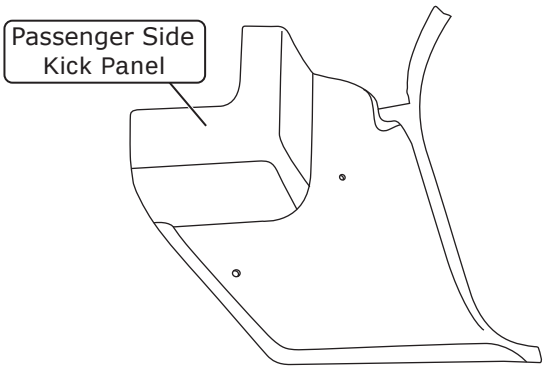

Figure 3

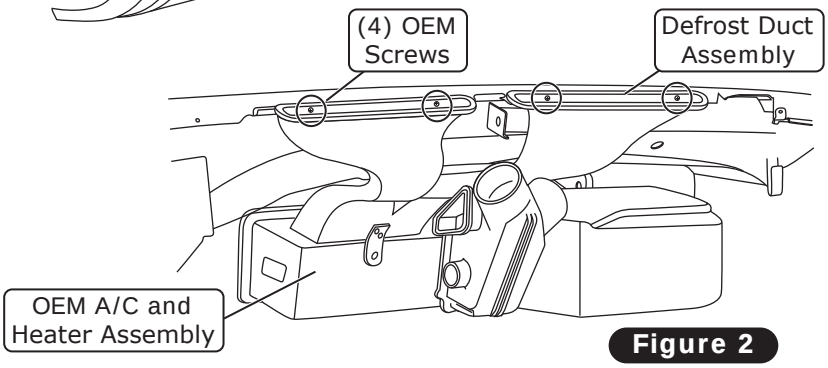

Figure 2

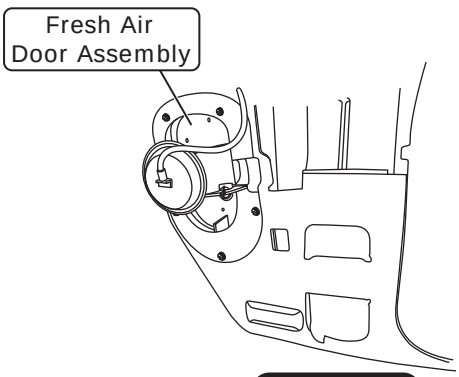

Figure 4

Firewall Modification

1. Remove the Christmas tree style insulation retainers and OEM insulation up to the transmission tunnel.
2. Flatten the edges of the firewall opening (See Photo 1, below).
3. Place the firewall cover onto the firewall. Locate the (8) mounting holes and enlarge the holes in the firewall to 9/32" to accommodate the 1/4-20 mounting bolts (See Figure 1, below).

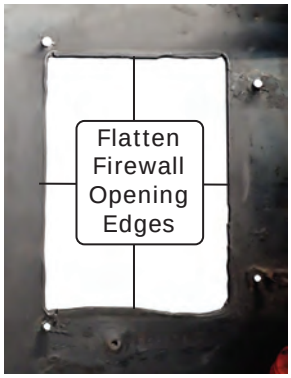

Photo 1

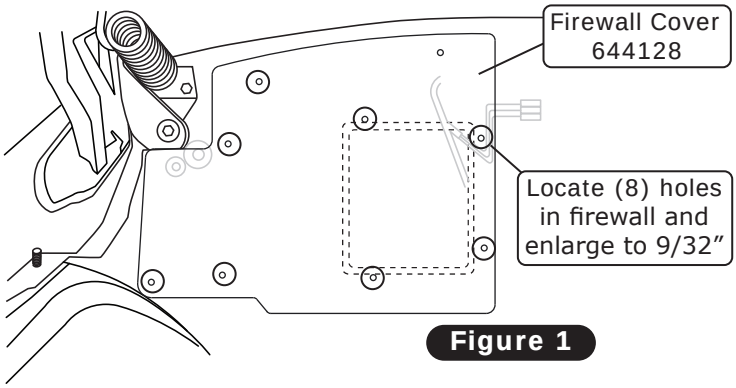

Figure 1

Firewall Cover Installation and Insulation

NOTE: For proper system operation, Vintage Air recommends using Dynaliner (461500-VIP) heat-blocking insulation in the area around the evaporator module (firewall, kick panel, inner cowl, firewall covers). Due to tight clearance for the evaporator module between the firewall and dash, Vintage Air recommends an insulation thickness of no more than 1/8".

1. Install (6) 1/4-20 x 3/4" serrated flange bolts with 1/4" pushnut bolt retainers onto the firewall cover (See Photo 1, below).
2. Apply silicone to the mating surface of the firewall cover (See Figure 1, below).
3. Install the firewall cover, then secure it using (6) 9/32" flat washers and (6) 1/4-20 hex nuts with star washers. (See Figure 2, below).
4. Install new 1/8" thick insulation to firewall, kick panel, inner cowl and firewall cover.

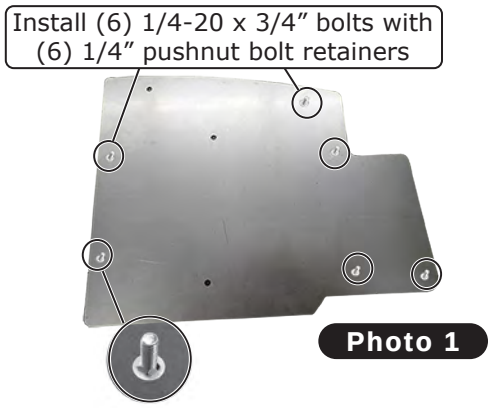

Photo 1

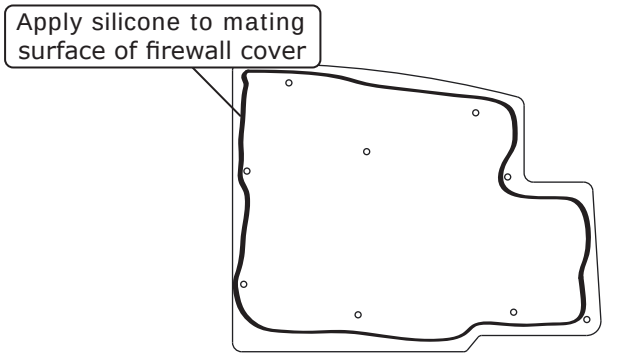

Figure 1

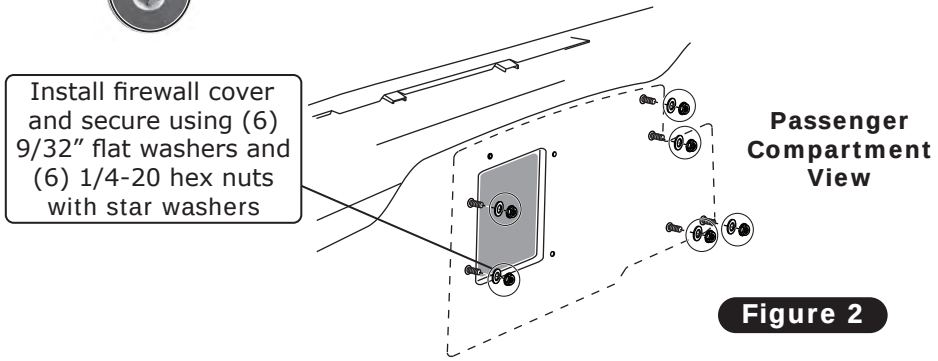
Install firewall cover and secure using (6) 9/32" flat washers and (6) 1/4-20 hex nuts with star washers
Passenger Compartment View

Figure 2

Defrost Duct Installation

1. Install the (2) defrost ducts under the dash, then secure them using the OEM screws (See Figure 1, below).

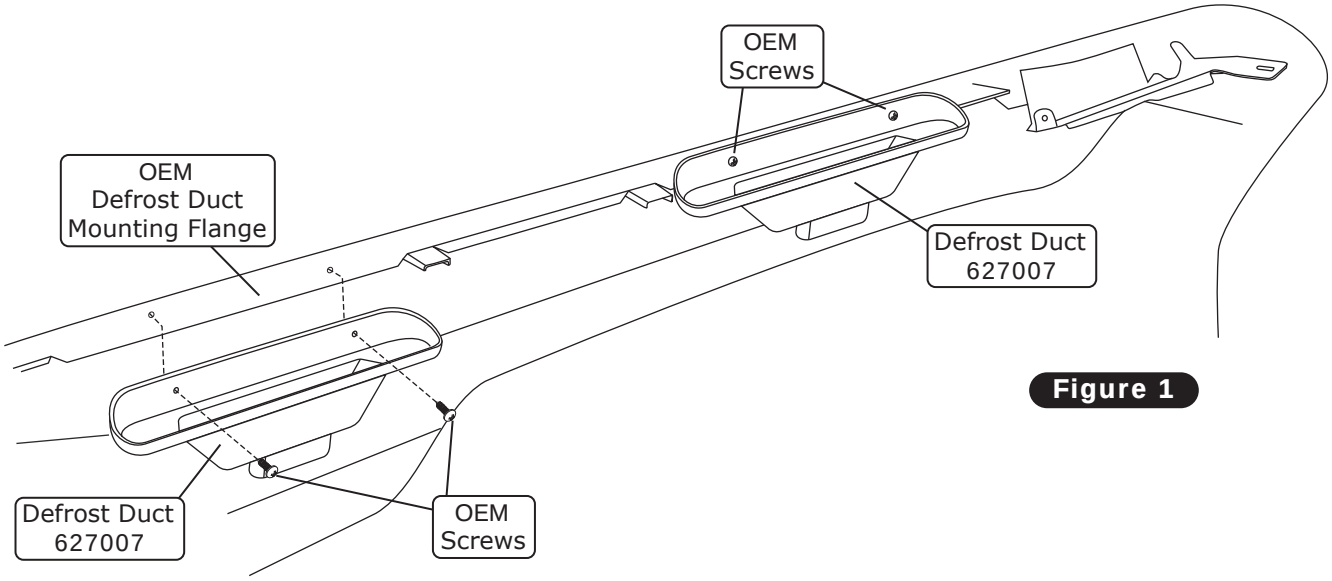

Figure 1

Hose Adapter Installation

1. Install (3) S-clips onto the (2) hose adapters as shown in Figure 1, below.
2. Install the driver- & passenger-side hose adapters inside the OEM louvers (See Figure 1, below).

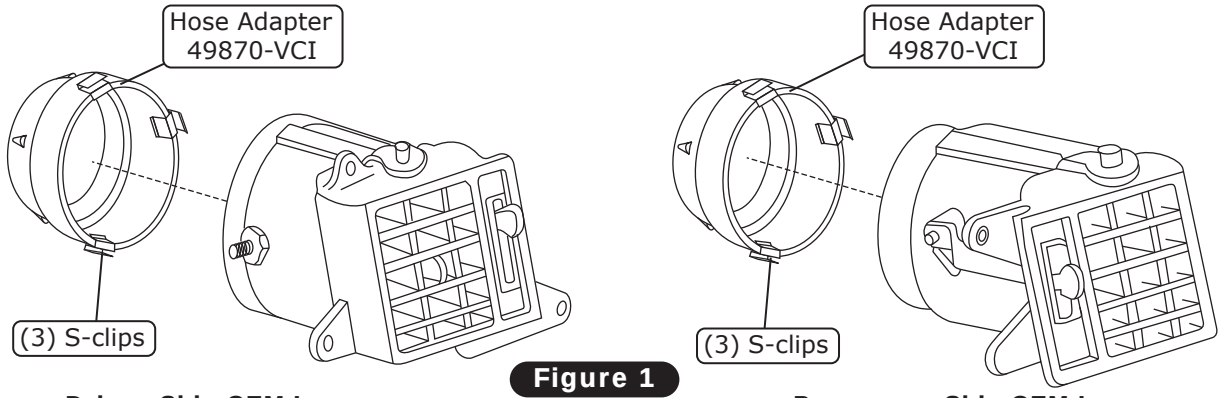

Figure 1

Driver-Side OEM Louver

Passenger-Side OEM Louver

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Fresh Air Cap & Kick Panel Cover Preparation

1. Install (4) large grommets and a 7/8” grommet into the fresh air cap (See Photos 1 & 2, below).
2. On the inside of the fresh air cap, the letter “T” indicates the top mounting hole for the firewall (See Photo 3, below).
3. From the center of the bottom-left hole on the kick panel cover, measure 1 ½” down. Mark and drill a 5/8” hole for the 7/8” grommet (See Photos 4 & 5, below).

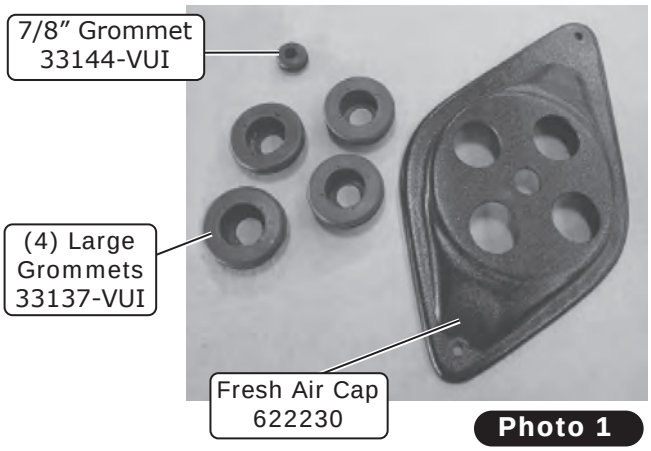


Photo 1

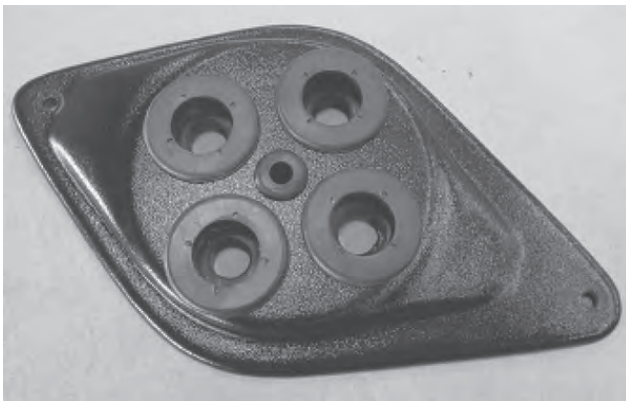


Photo 2

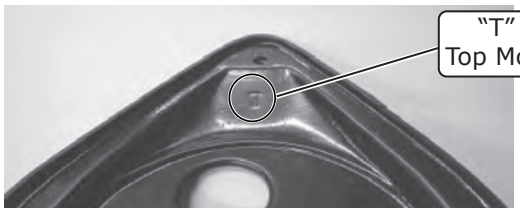


Photo 3

Photo 4

Photo 5

Fresh Air Cap & Kick Panel Cover Preparation (Cont.)

4. Install (4) large grommets and a 7/8" grommet into the kick panel cover (See Photos 6 & 7, below).

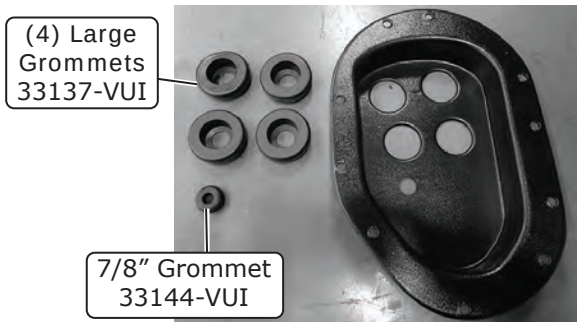
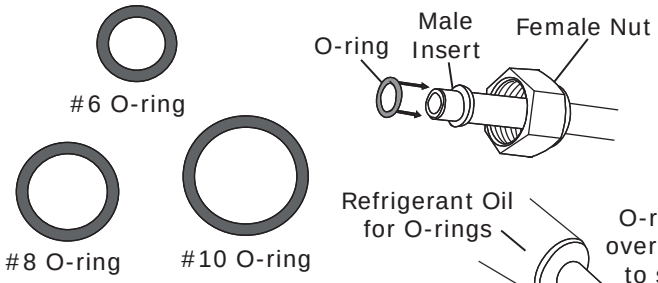
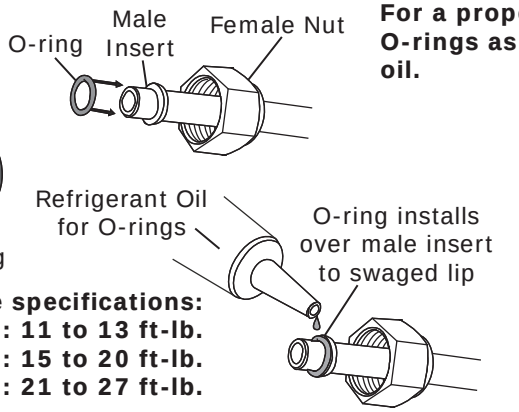


Photo 6

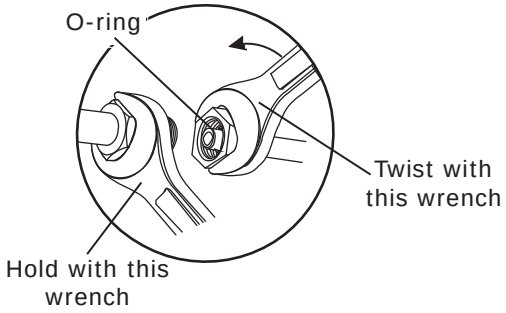
Photo 7

Lubricating O-rings





For a proper seal of fittings: Install supplied O-rings as shown and lubricate with refrigerant oil.



NOTE: Standard torque specifications:
#6: 11 to 13 ft-lb.
#8: 15 to 20 ft-lb.
#10: 21 to 27 ft-lb.

Properly Seated O-ring Land

When installing hardline or A/C hose fittings onto the evaporator module, ensure the O-ring land is seated properly (See Photo 1, below). An improperly seated O-ring land (See Photo 2, below) can cause a leak. To properly install the fitting, slide the hardline or A/C hose nut back to expose the O-ring land and seat it onto the evaporator module fitting. Slide the hardline or A/C hose nut forward and thread it onto the evaporator module fitting, ensuring the O-ring land does not move or lift.

Properly Seated O-ring Land

Photo 1

Improperly Seated O-ring Land

Photo 2

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Evaporator Module Preparation

Perform the following on a workbench:

1. Install (2) 1/2" plastic plugs, (1) into the front (See Photo 1, below) and (1) into the back of the evaporator module (See Photo 2, below). **NOTE: These mounting positions will not be used for this application.**
2. Install the upper and lower heater hardlines onto the evaporator module using (2) properly lubricated #10 O-rings (See Lubricating O-rings, Page 11 and Photo 3, below).
3. Install (2) 1/4-20 well nuts into the back of the evaporator module (See Photo 4, below).
4. Install the evaporator firewall bracket onto the module (See Photo 5, below), and secure it using (4) #10 x 5/8" screws (See Photos 5 and 6, below).
5. Install (2) 1/4-20 x 1" serrated flange bolts into the 1/4-20 well nuts (See Photo 7, below).
6. Install a 1/4-20 x 1 ½" full-threaded stud halfway into the lower mounting hole on the evaporator firewall bracket (See Photo 8, below).
7. Using (2) spring clips, install the floor plenum onto the back of the evaporator module (See Photo 9, below).

Photo 1

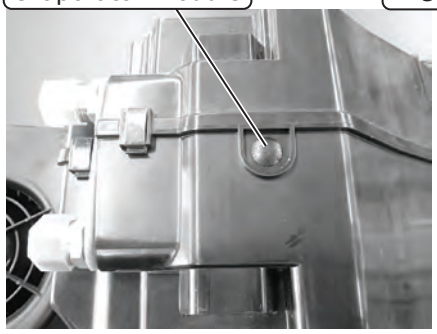


Photo 2

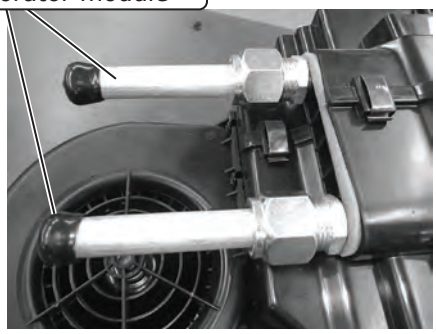


Photo 3

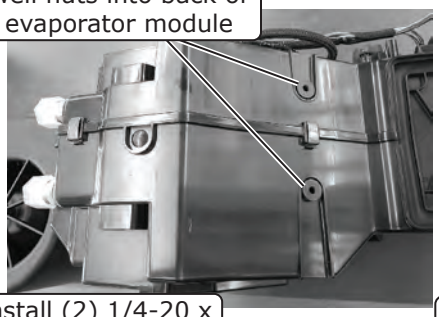


Photo 4

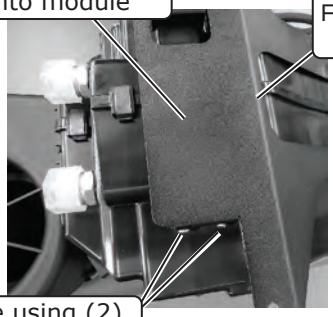


Photo 5

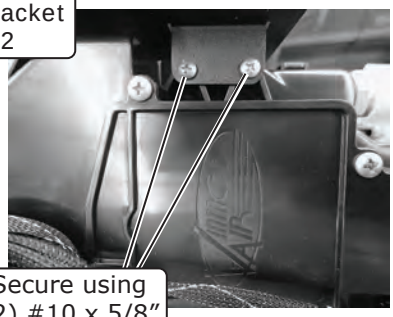


Photo 6

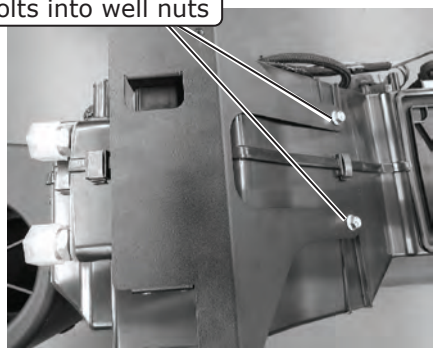


Photo 7

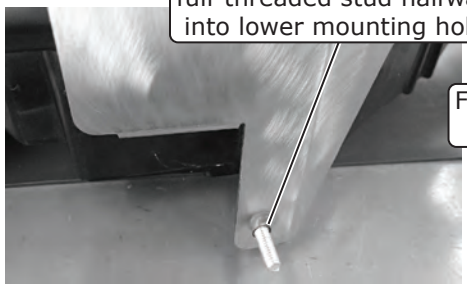


Photo 8

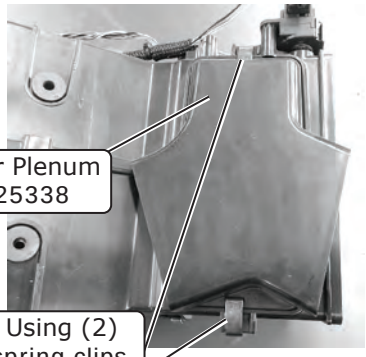


Photo 9

Evaporator Module Preparation (Cont.)

8. Using (4) spring clips, install the dash plenum onto the evaporator module (See Photos 10 and 11, below).
9. Using (2) spring clips, install the defrost plenum onto the front of the evaporator module (See Photo 12, below).

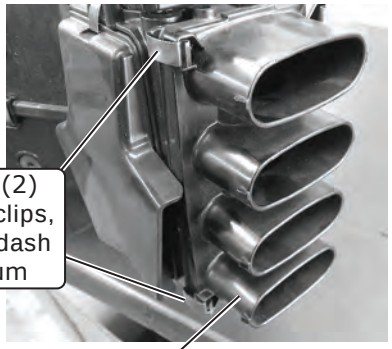


Photo 10

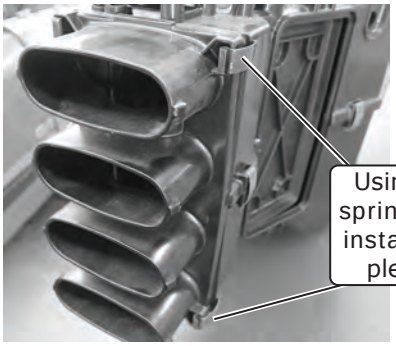


Photo 11

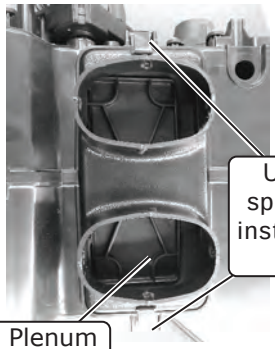


Photo 12

Wiring Installation

1. Locate the heater control valve plug on the main wiring harness (white/yellow/purple). Route it through the 7/8" wiring grommet on the kick panel cover (See Photo 1, below) and into the kick panel opening. Then, through the wiring grommet on the fresh air cap (See Photo 2, below) and into the engine compartment.
2. Route the red, white and blue wires from the main harness through the 7/8" wiring grommet on the kick panel cover (See Photo 3, below) and into the kick panel opening. Then, through the wiring grommet on the fresh air cap and into the engine compartment (See Photo 4, below).
3. Leave approximately 12" of wiring between the kick panel cover and relay.
4. Place the evaporator module on the passenger-side floorboard.
5. Route the heavy gauge orange and white wires through the wiring grommet in the kick panel cover (See Photo 5, below) and into the kick panel opening. Then, through the wiring grommet on the fresh air cap and into the engine compartment (See Photo 6, below).

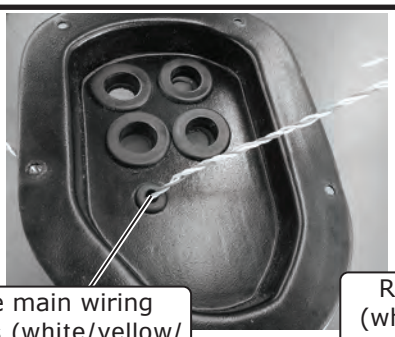


Photo 1

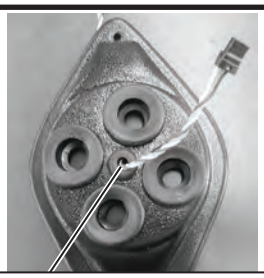


Photo 2

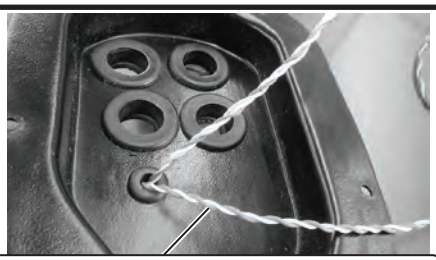


Photo 3

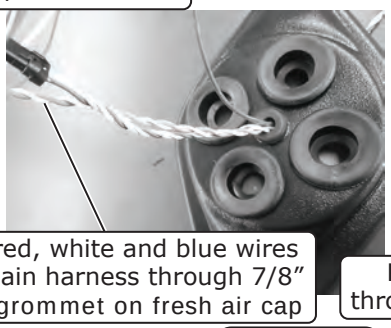


Photo 4

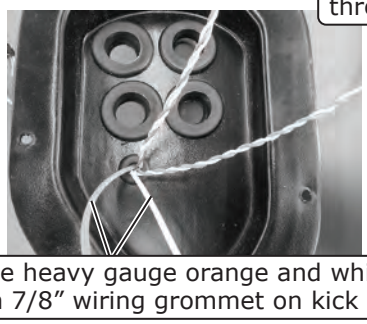


Photo 5

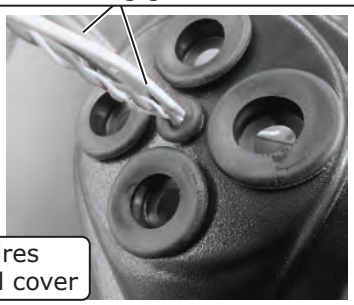


Photo 6

Wiring Installation (Cont.)

6. Connect the blower speed controller plug into the main wiring harness plug (orange and green wires) (See Photo 7, below).

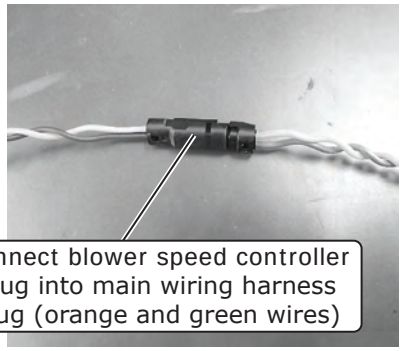


Photo 7

Kick Panel Cover Installation

1. Route the A/C and heater hoses through the kick panel cover as shown in Figure 1, below.
2. Apply 1/4" bead of silicone around the mating surface of the kick panel cover as shown in Figure 1, below.
3. Secure the kick panel cover using (5) #8 x 1 ¼" countersunk with washer screws as shown in Figure 1, below.

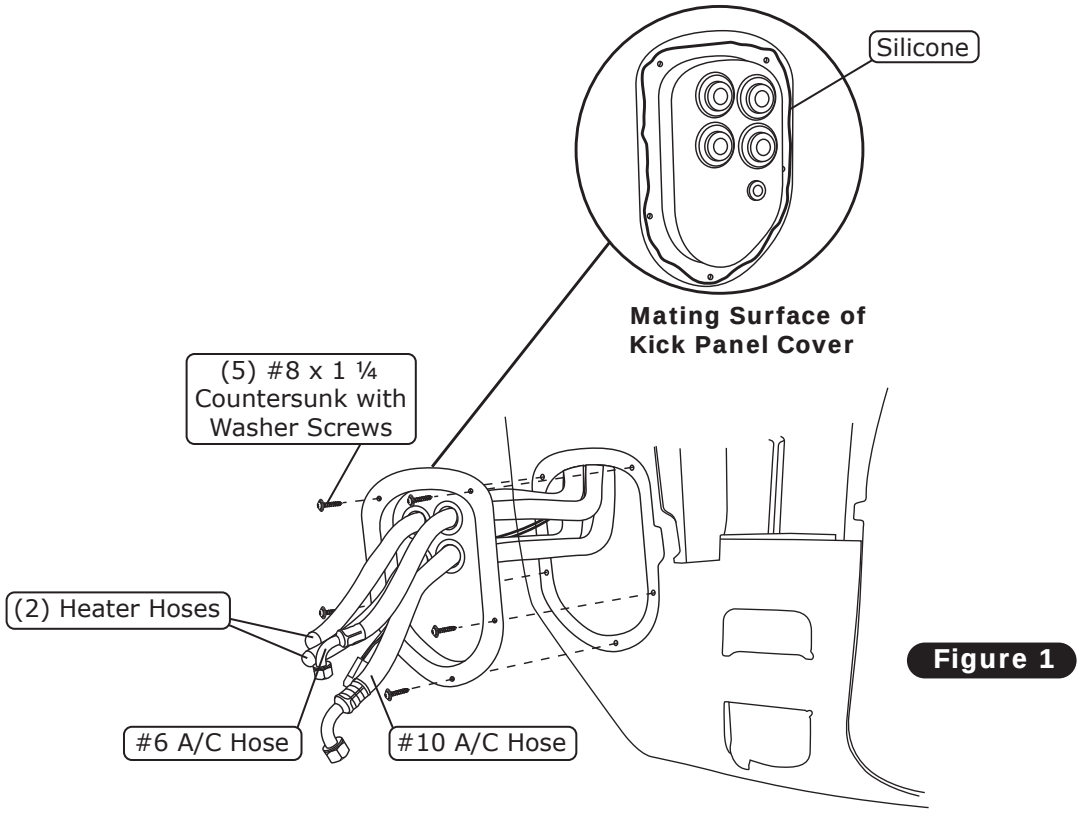


Figure 1

Fresh Air Cap Installation

NOTE: The fresh air cap installs on the engine side of the firewall.

1. Route the A/C and heater hoses through the fresh air cap as shown in Figure 1, below.
2. Gently pull the slack from the hoses in the passenger compartment, ensuring the hoses are not kinked.
3. Slide the fresh air cap into position, and secure it to the firewall using (2) #14 x 3/4" washer head screws (See Photo 1, below).
4. Apply silicone around the outer edge of the fresh air cap (See Photo 1, below).

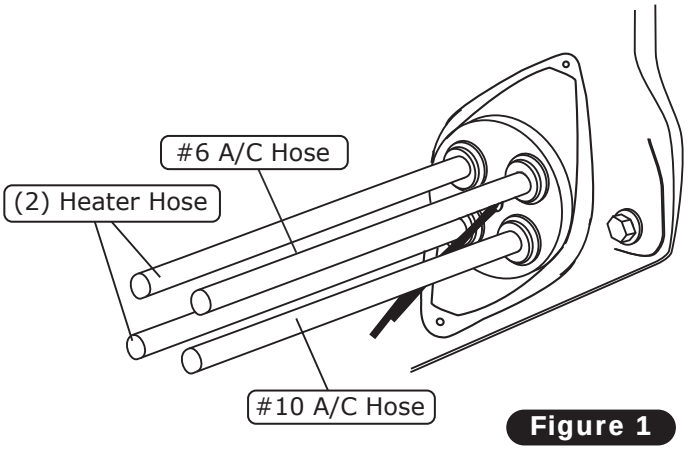


Figure 1

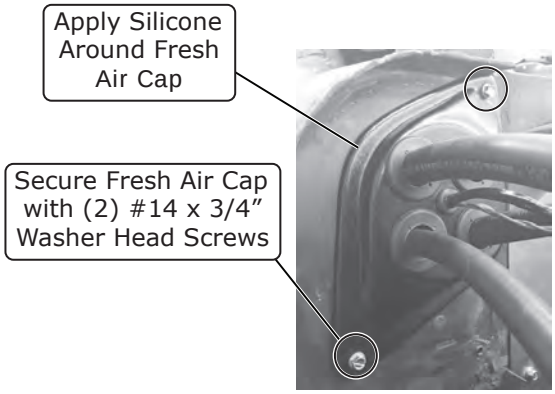


Photo 1

Evaporator Installation

1. With the evaporator module on the passenger-side floorboard, install the upper and lower heater hoses and hose clamps onto the upper and lower heater hardlines on the evaporator module (See Photos 1 and 2, below).
2. Roll the evaporator module into its mounting position and insert the 1/4-20 x 1 ½" full-threaded stud into the lower OEM mounting hole on the firewall.
3. Using a properly lubricated #6 O-ring (See Lubricating O-rings, Page 11), install the 90° fitting on the #6 drier/evaporator A/C hose onto the block valve adapter on the evaporator module (See Photo 3, below). **NOTE: Provide enough A/C hose when connecting the 90° fitting to the module. Once the connection is made, pull excess hose into the engine compartment, being sure not to kink it.**

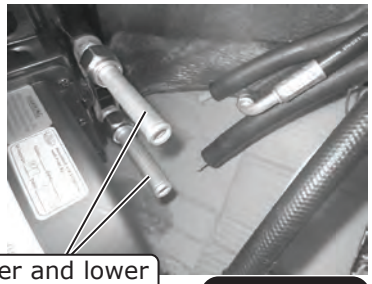


Photo 1

Photo 2

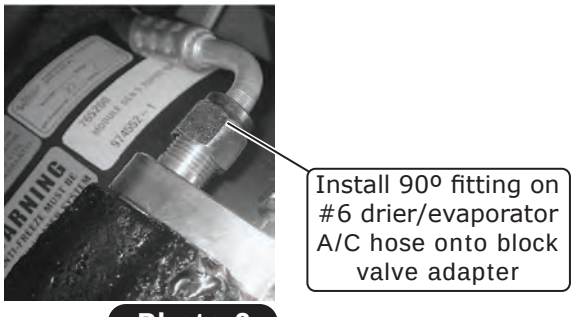


Photo 3

Evaporator Installation (Cont.)

4. Using a properly lubricated #10 O-ring (See Lubricating O-rings, Page 11), install the 45° fitting on the #10 compressor/evaporator A/C hose onto the #10 fitting on the block valve adapter on the evaporator module (See Photo 4, below). **NOTE: After installing the #10 compressor/evaporator A/C hose, wrap all exposed metal with the supplied press tape (See Photo 5, below).**
5. Install a 1/4-20 well nut into the left-front mounting hole on the evaporator module (See Photo 6, below).
6. Remove the OEM dash mounting bolt and replace it with a 1/4-20 x 1" hex bolt and a 9/32" flat washer (See Photo 7, below).
7. Install a .25" length nylon spacer onto the other side of the mounting bracket (See Photo 8, below).
8. Loosely install the evaporator cowl bracket onto the evaporator module using a 1/4-20 x 1" serrated flange hex bolt (See Photo 10, below). Secure the installed dash mounting bolt onto the evapoator cowl bracket using a 1/4-20 hex nut with star washer (See Photos 9 and 10, below). **NOTE: To ensure proper drainage, it is very important that the evaporator module is level, both left-right and fore-aft. Check for level on the flat portions of the case around the drain.**

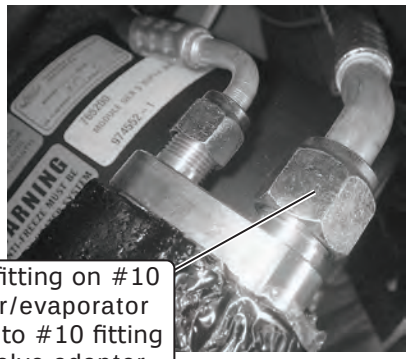


Photo 4

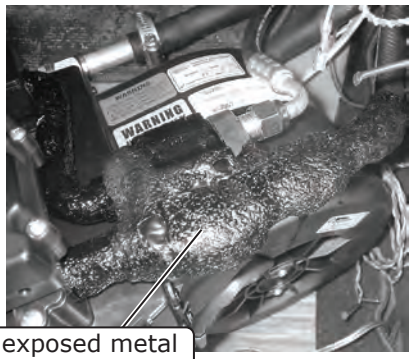


Photo 5

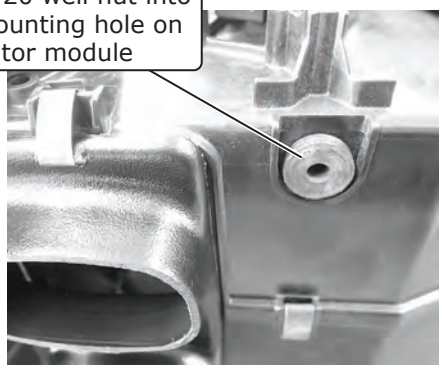
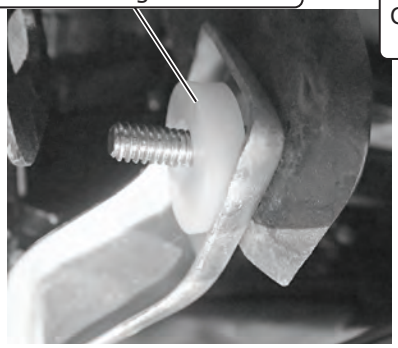


Photo 6

Photo 7



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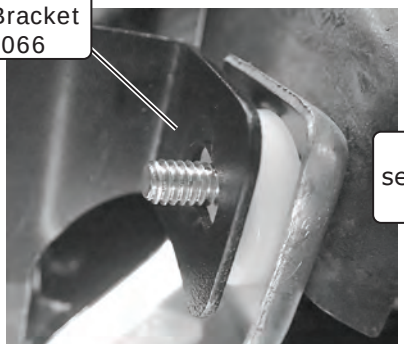


Photo 9

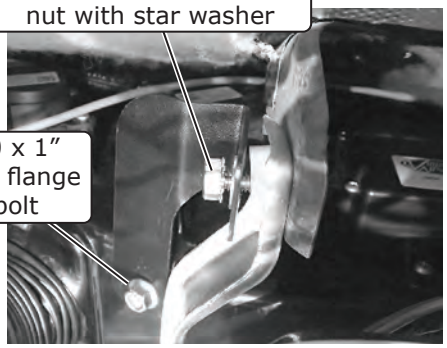


Photo 10

Evaporator Installation (Final)

9. Once the module is in position and leveled, from the engine compartment, install (2) 1/4-20 x 3/4" serrated flange black zinc bolts (one in the upper mounting hole and one replacing the 1/4-20 full-length stud) (See Photo 11, below).

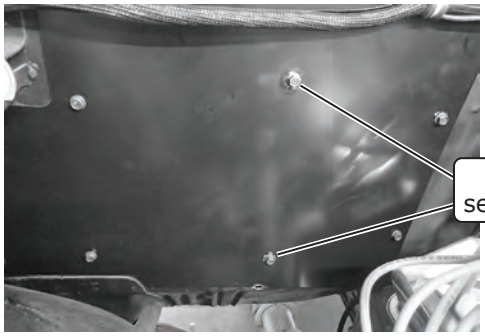


Photo 11

Center Louver Installation

1. Remove the center louver door flap (See Figure 1, below).
2. Modify the center louver assembly as shown in Figures 2 & 3, below.
3. Install (4) S-clips onto the hose adapter (See Figure 4, below).
4. Install the center louver hose adapter onto the center louver assembly as shown in Figure 4, below.

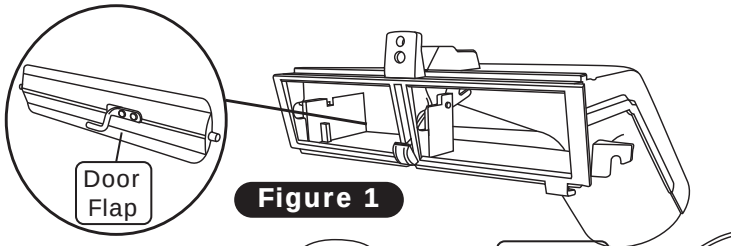
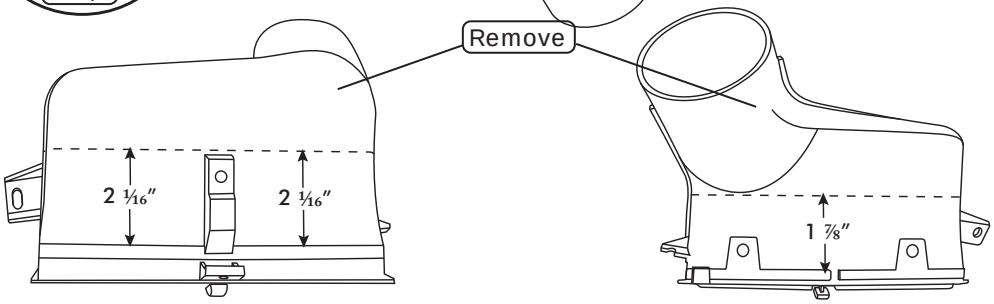


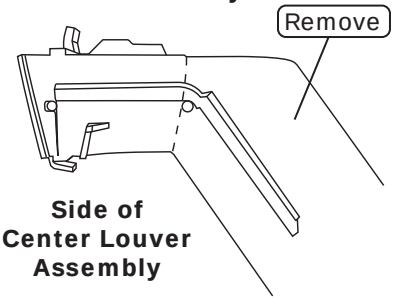
Figure 1



Top of Center Louver Assembly

Figure 2

Bottom of Center Louver Assembly



Side of Center Louver Assembly

Figure 3

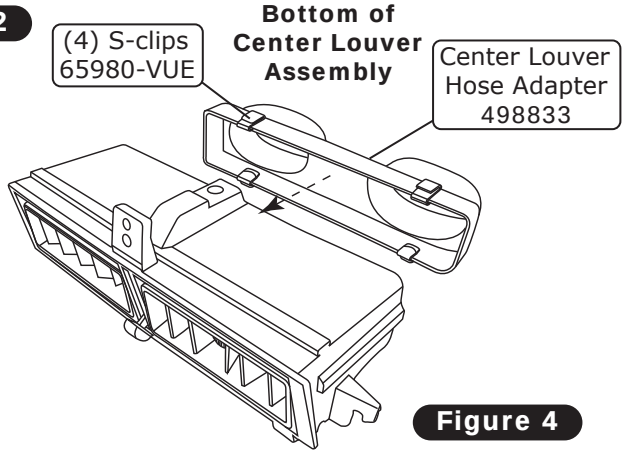


Figure 4

Drain Hose Installation

1. Locate the evaporator drain on the bottom of the evaporator case.
2. In line with the drain, lightly make a mark on the firewall. Measure 1” down. Drill a 5/8” hole through the firewall (See Figure 1, below).
3. Install the drain hose to the outlet on the bottom of the evaporator module, and route it through the firewall (See Figure 2, below).

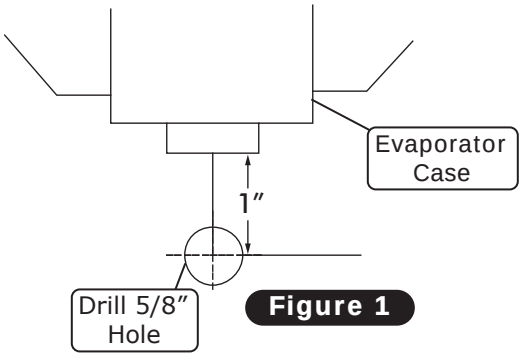


Figure 1

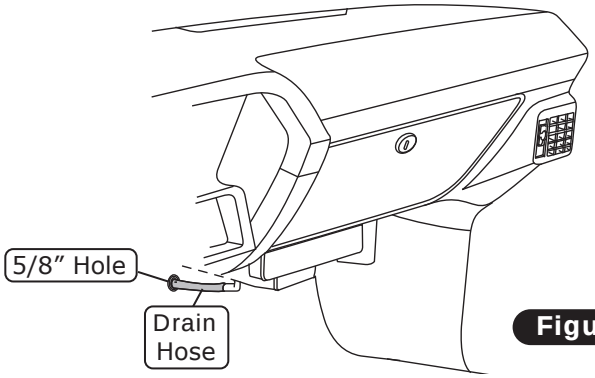


Figure 2

A/C Hose Installation

Standard Hose Kit:

1. Locate the #8 compressor A/C hose. Lubricate (2) #8 O-rings (See Lubricating O-rings, Page 11) and connect the 135° female fitting with service port to the #8 discharge port on the compressor. Then, route the straight female fitting to the #8 condenser hardline coming through the core support (See Figure 1, Page 19). Tighten each fitting connection as shown in Lubricating O-rings, Page 11.
2. Lubricate a #10 O-ring (See Lubricating O-rings, Page 11) and connect the #10 135° female fitting with service port to the #10 suction port on the compressor.
3. Lubricate a #6 O-ring (See Lubricating O-rings, Page 11) and connect the straight female fitting to the #6 hardline coming through the core support from the drier.
4. Using a 1” ID Adel clamp, a 10-32 x 1/2” pan head screw and a 10-32 nut with star washer, secure the #10 A/C hose to the alternator bracket as shown in Figure 1, Page 19.

Modified Hose Kit:

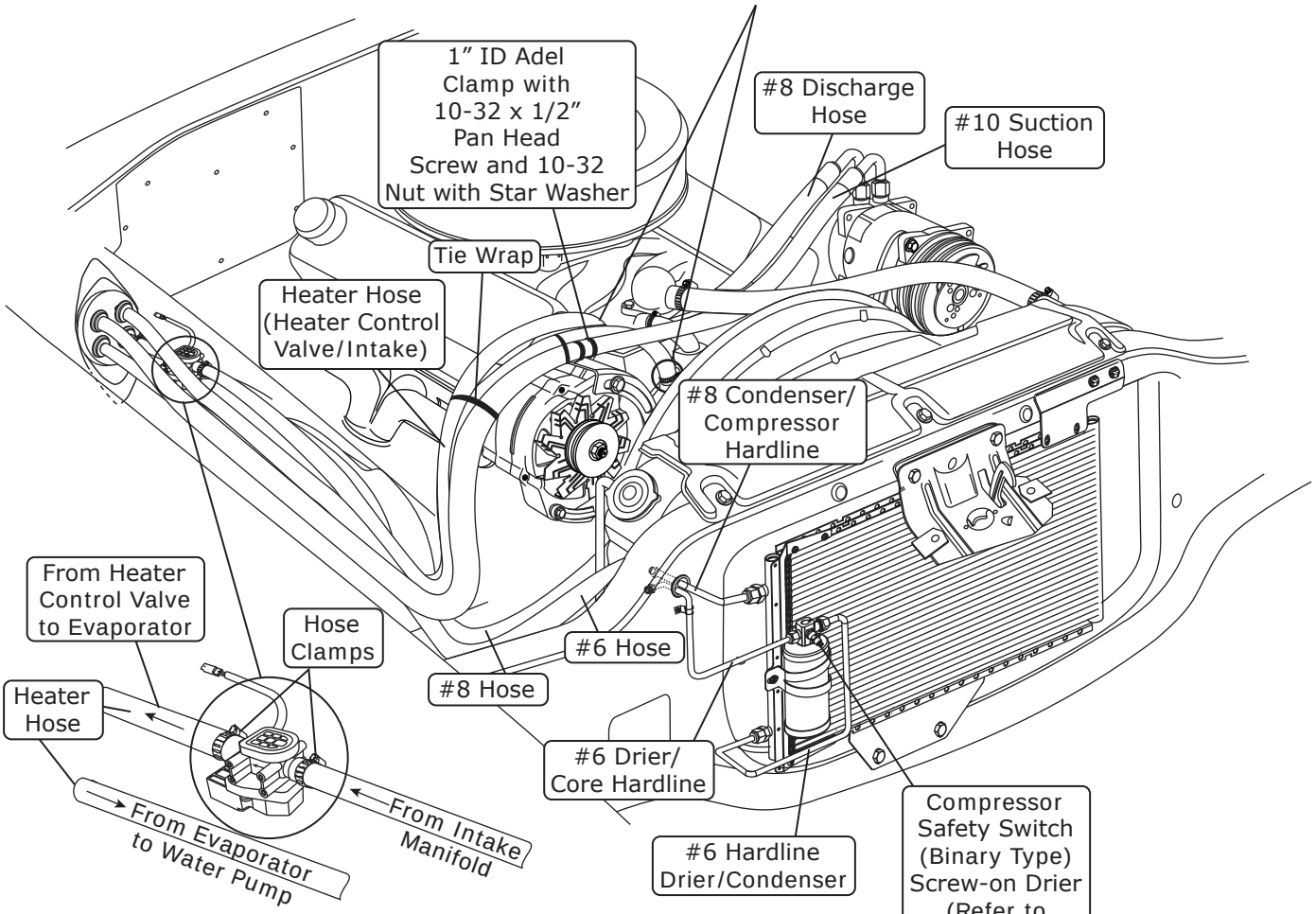
1. Refer to separate instructions included with modified hose kit.

Heater Hose & Heater Control Valve Installation

1. Route a piece of heater hose from the water pump to the top heater fitting of the heater core as shown in Photo 2, Page 15, and Figure 1, below. Secure using hose clamps.
2. Route a piece of heater hose from the intake to the bottom heater fitting of the heater core as shown in Photo 2, Page 15, and Figure 1, below. **NOTE: Install heater control valve in line with intake manifold (pressure side) heater hose. Secure using hose clamps as shown in Figure 1, below. Also note proper flow direction.**

A/C & Heater Hose Routing

NOTE: Vintage Air Systems use 5/8" heater connections. On engines equipped with 3/4" hose nipples, these will need to be removed and replaced with 5/8" nipples (not supplied). For water pumps with a cast-in 3/4" heater outlet, a 3/4" x 5/8" reducer fitting in the heater hose (not supplied) or molded hose (Vintage Air Part # 099010) will need to be installed.


1" ID Adel Clamp with 10-32 x 1/2" Pan Head Screw and 10-32 Nut with Star Washer
#8 Discharge Hose
#10 Suction Hose
Tie Wrap
Heater Hose (Heater Control Valve/Intake)
#8 Condenser/ Compressor Hardline
From Heater Control Valve to Evaporator
Hose Clamps
Heater Hose
#6 Hose
#8 Hose
#6 Drier/ Core Hardline
From Evaporator to Water Pump
From Intake Manifold
#6 Hardline Drier/Condenser
Compressor Safety Switch (Binary Type) Screw-on Drier (Refer to Condenser Instructions)

NOTE: Flow direction follows molded arrow on valve.

Figure 1

Wiring Final

1. Select a suitable ground location for the white ground wire eyelet from the heater control valve harness and secure it using a #10 x 1/2" sheet metal screw.
2. Route the violet power wire to a switched 12v power source on the fuse panel (See Photo 1, below). **NOTE: This requires a male fuse extension (not supplied)**.
3. Connect the tan wire to the factory dash lights to enable control panel backlighting (if applicable).
4. Connect the main harness to the ECU (See Photo 2, below).
5. Select a suitable mounting location for the main relay.

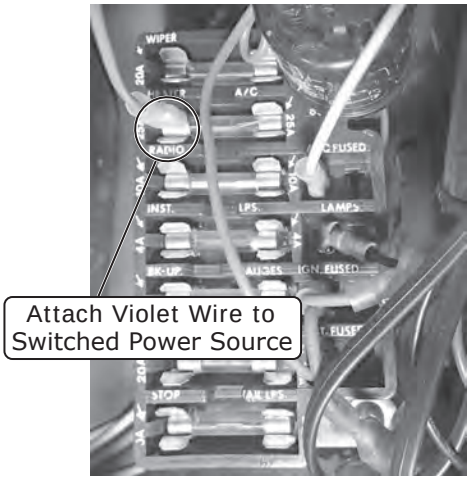


Photo 1

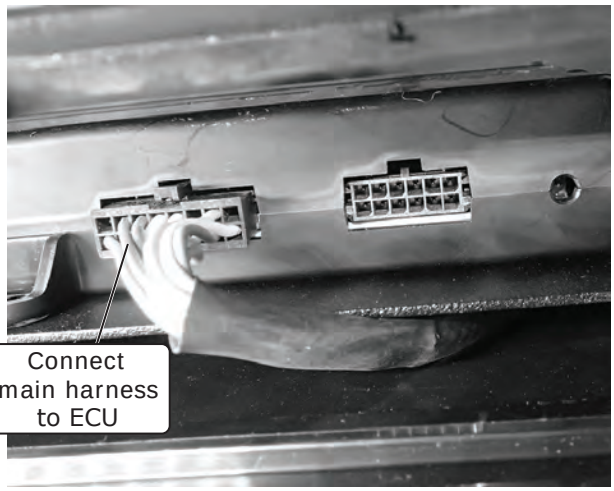


Photo 2

Engine Compartment Wiring

1. Route power and ground wires toward the battery.
2. Install the supplied heat shrink over the 12 AWG orange fuse holder assembly wire, and crimp it to the 12 AWG orange wire from the main wiring harness (See Photo 1, below and Quality Crimp Guidelines, Page 25).
3. Install the supplied heat shrink over the 16 AWG black fuse holder assembly wire, and crimp it to the 16 AWG red wire from the main wiring harness (See Photo 2, below and Quality Crimp Guidelines, Page 25).
4. Install fuses into the holders (See Photo 3, below).
5. Install the supplied heat shrink over the white ground wires, then crimp on the supplied eyelets (See Photos 4 and 5, below and Quality Crimp Guidelines, Page 25)
6. Connect the ground wiring eyelets to the negative battery terminal connector (See Photo 6, below).
7. Connect the positive wiring eyelets to the positive battery terminal connector (See Photo 7, below).
   NOTE: Do not connect power until installation is completed.

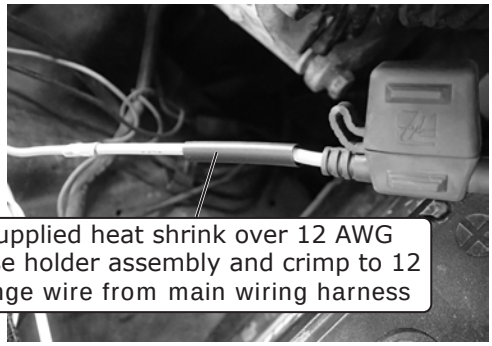

Install supplied heat shrink over 12 AWG orange fuse holder assembly and crimp to 12 AWG orange wire from main wiring harness

Photo 1

Install supplied heat shrink over 16 AWG black fuse holder assembly wire and crimp to 16 AWG red wire from main wiring harness

Photo 2

Photo 3

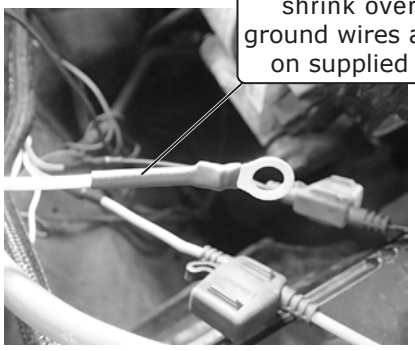
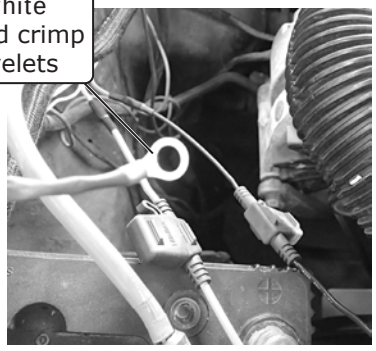


Photo 4



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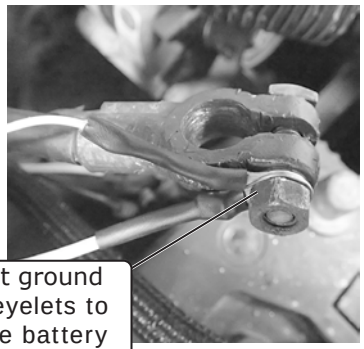

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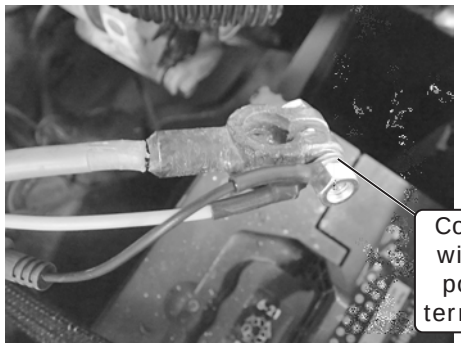


Photo 7

NOTE: Do not connect power until installation is completed.

Final Steps: Installation Check

Installation Check		
ITEM TO CHECK		Procedure
☐	ECU	If no blinking is observed after 1 minute of turning the ignition on, go to the next check. If repetetive blinking is observed, go to the **Advanced Diagnostics** Section to diagnose.
☐	Blower speed control	Set the blower speed control to **OFF**, *confirm that the blower is off*. Position the blower speed control to **LOW** then **MEDIUM** and then **HIGH**. *At each setting confirm that the blower speed increases*, do this by feeling for the amount of air coming from the unit and hearing the blower speed increase.
☐	Mode control	Set the **MODE** control to the **DASH** position. *Confirm that air is being blown at the dash vents.* Set the **MODE** control to the **FLOOR** position. *Confirm that air is being blown at the floor vents.* Set the **MODE** control to the **DEFROST** position. *Confirm that all air is being blown from the defrost vents*
☐	Temperature control	**If heater lines are installed:** Set the **MODE** control to the **DASH** position. Set the **TEMP** control to the **MAX HEAT** position. *Confirm that HOT air is coming from the dash vents.* **If system is charged:** Set the **TEMP** control to the **MAX COOL** position. *Confirm that **COLD** air is coming from the dash vents.* Also *confirm that the compressor "clicks" on* when adjusting the **TEMP** control from the **MAX HEAT** position to the **MAX COOL** position.
☐	AC Indicator (If applicable)	While the **MODE** control is set to the **DASH** position, and the **TEMP** control is set to the **MAX COOL/MIN HEAT** position, *confirm that the blue AC Indicator light is on*.
☐	Backlight (If applicable)	If your control panel has backlight capabilities and has been wired, turn the dash lamp on and *confirm that the AC panel's legend is lit*.
☐	Fittings	Verify AC and Heater fittings are all tight.

Final Steps

1. Install the duct hoses as shown in Figure 1, Page 24.
2. Install the control panel assembly. Refer to the control panel instructions.
3. Modify the glove box as shown in Figure 2, below.
4. Install (4) S-clips onto the glove box cap, and install the glove box cap onto the glove box as shown in Figure 3, below.
5. Modify the passenger-side kick panel as shown in Figure 3, below.
6. Reinstall the kick panel with the OEM screws.
7. Reinstall all previously removed items (battery tray, battery, and inner fender).
8. Fill radiator with at least a 50/50 mixture of approved antifreeze and distilled water. It is the owner's responsibility to keep the freeze protection at the proper level for the climate in which the vehicle is operated. Failure to follow antifreeze recommendations will cause heater core to corrode prematurely and possibly burst in A/C mode and/or freezing weather, voiding your warranty.
9. Double check all fittings, brackets and belts for tightness.
10. Vintage Air recommends that all A/C systems be serviced by a licensed automotive A/C technician.
11. Evacuate the system for a minimum of 45 minutes prior to charging, and perform a leak check prior to servicing.
12. Charge the system to the capacities stated on Page 4 of this instruction manual.
13. See Operation of Controls procedures on Page 28.

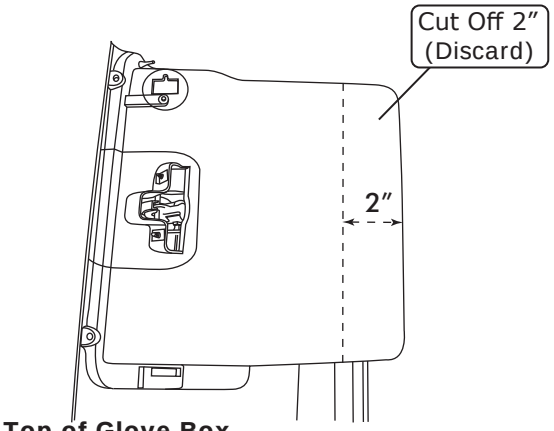


Figure 1

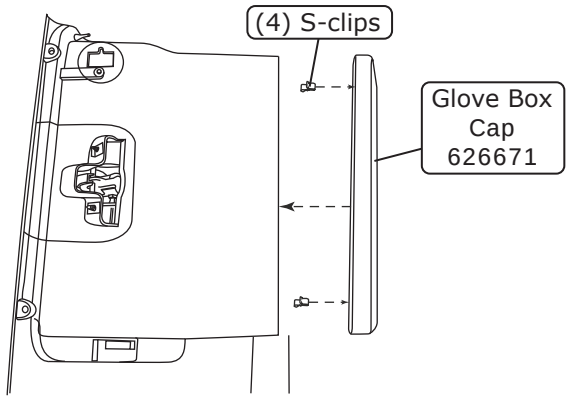


Figure 2

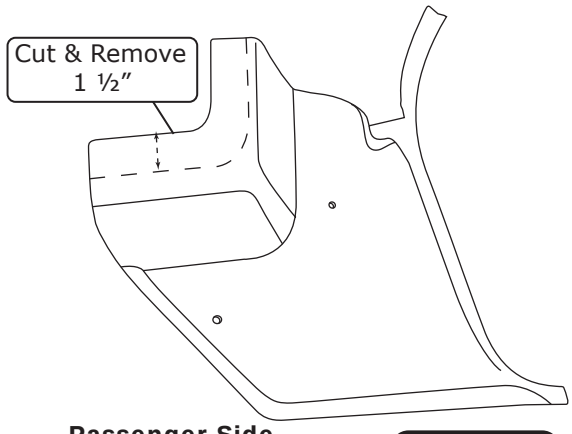


Figure 3

Duct Hose Routing

NOTE: For the system to function optimally, the duct hoses must be routed as directly as possible, taking care to avoid kinks, sharp bends and unnecessary length. Vintage Air supplies duct hoses in continuous lengths that will need to be cut to size depending on application. Before cutting, familiarize yourself with the installation instructions and verify the routing will work with your application. For custom hose routing, additional hose may be needed and can be purchased from Vintage Air.

1. Stretch the duct hose until there is no slack, measure, mark and cut hose to size (See Photo 1, below).

Photo 1

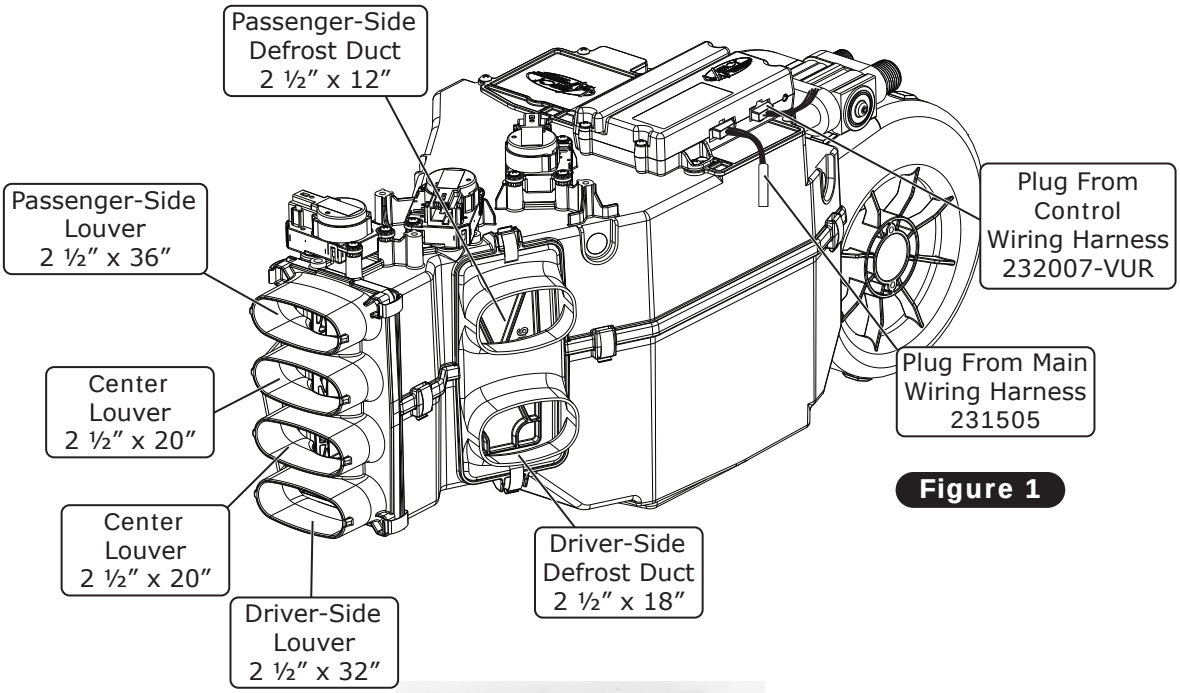
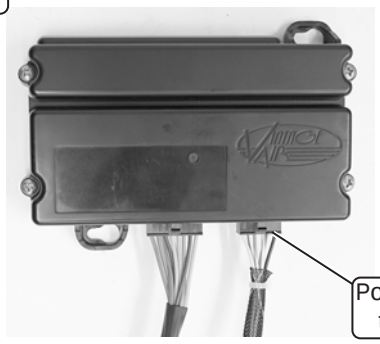

Passenger-Side Defrost Duct 2 ½" x 12"
Passenger-Side Louver 2 ½" x 36"
Center Louver 2 ½" x 20"
Center Louver 2 ½" x 20"
Driver-Side Louver 2 ½" x 32"
Driver-Side Defrost Duct 2 ½" x 18"
Plug From Control Wiring Harness 232007-VUR
Plug From Main Wiring Harness 231505

Figure 1



NOTE: ECU must be placed away from water and humidity, and also be accessible for servicing. If relocating, connectors must be positioned towards the bottom.

Quality Crimp Guideline

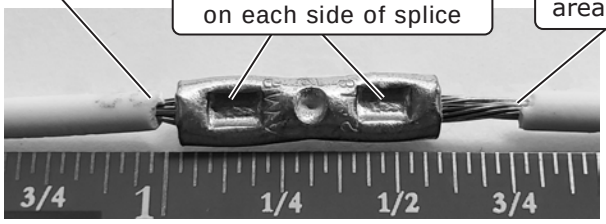


Photo 1

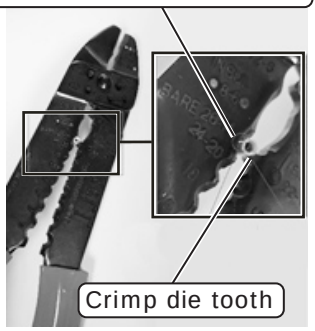


Photo 2

Good Ring Terminal Crimp **Bad Ring Terminal Crimp**

Photo 3

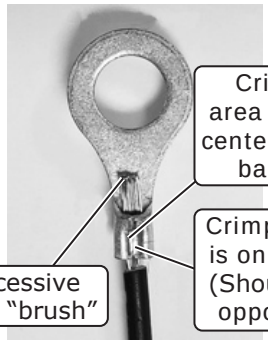


Photo 4

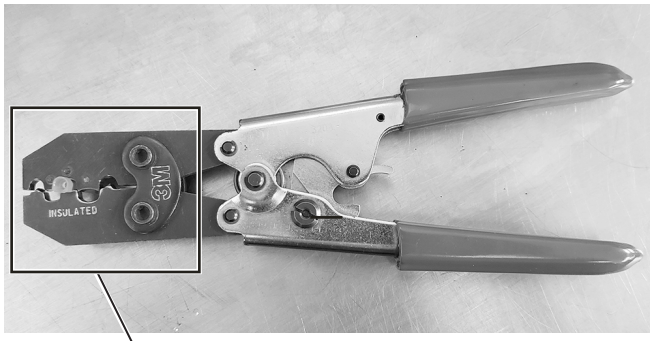


Photo 5

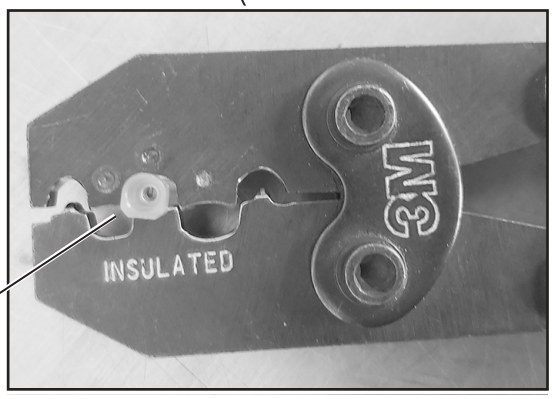
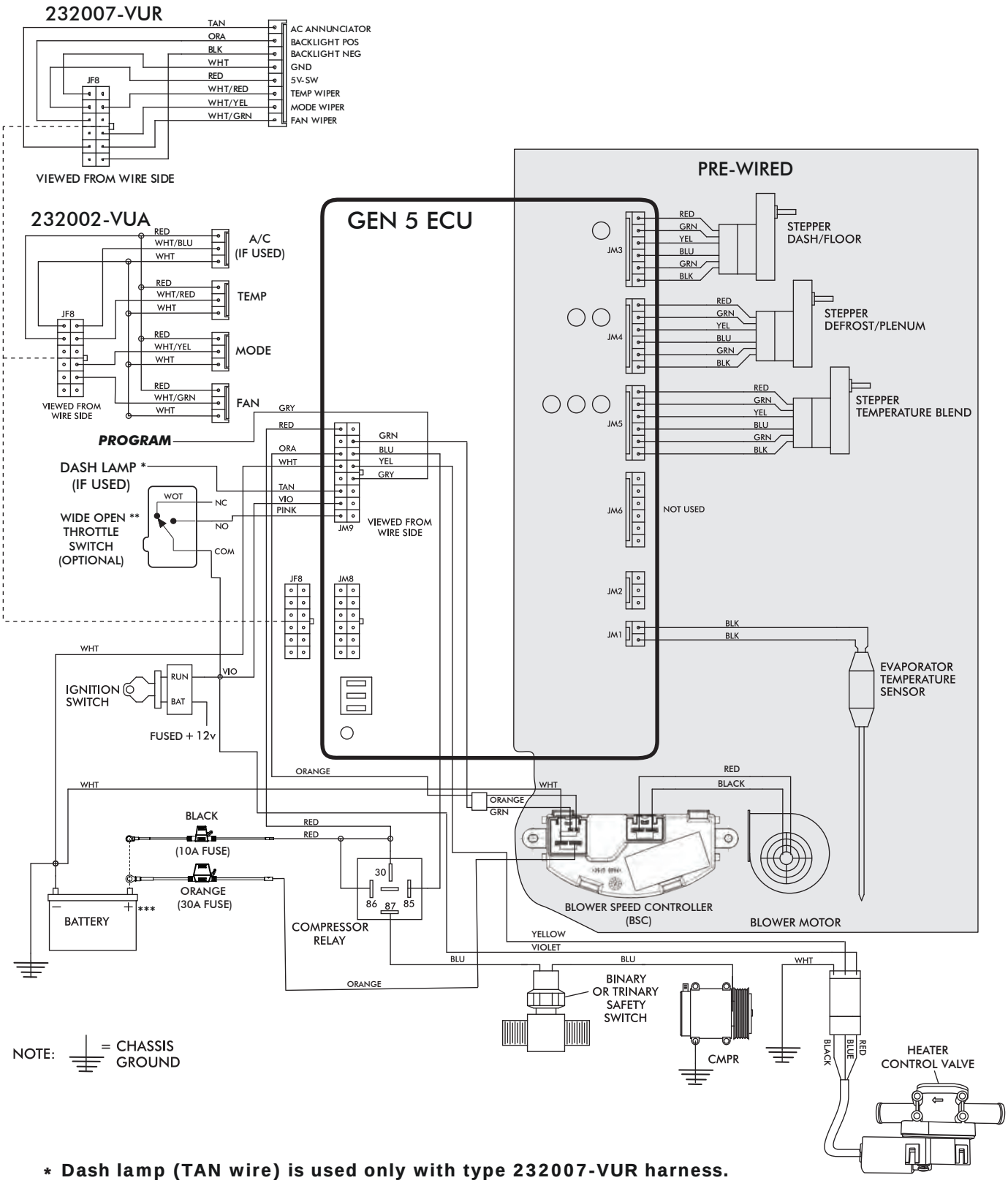


Photo 5a

Gen 5 Wiring Diagram

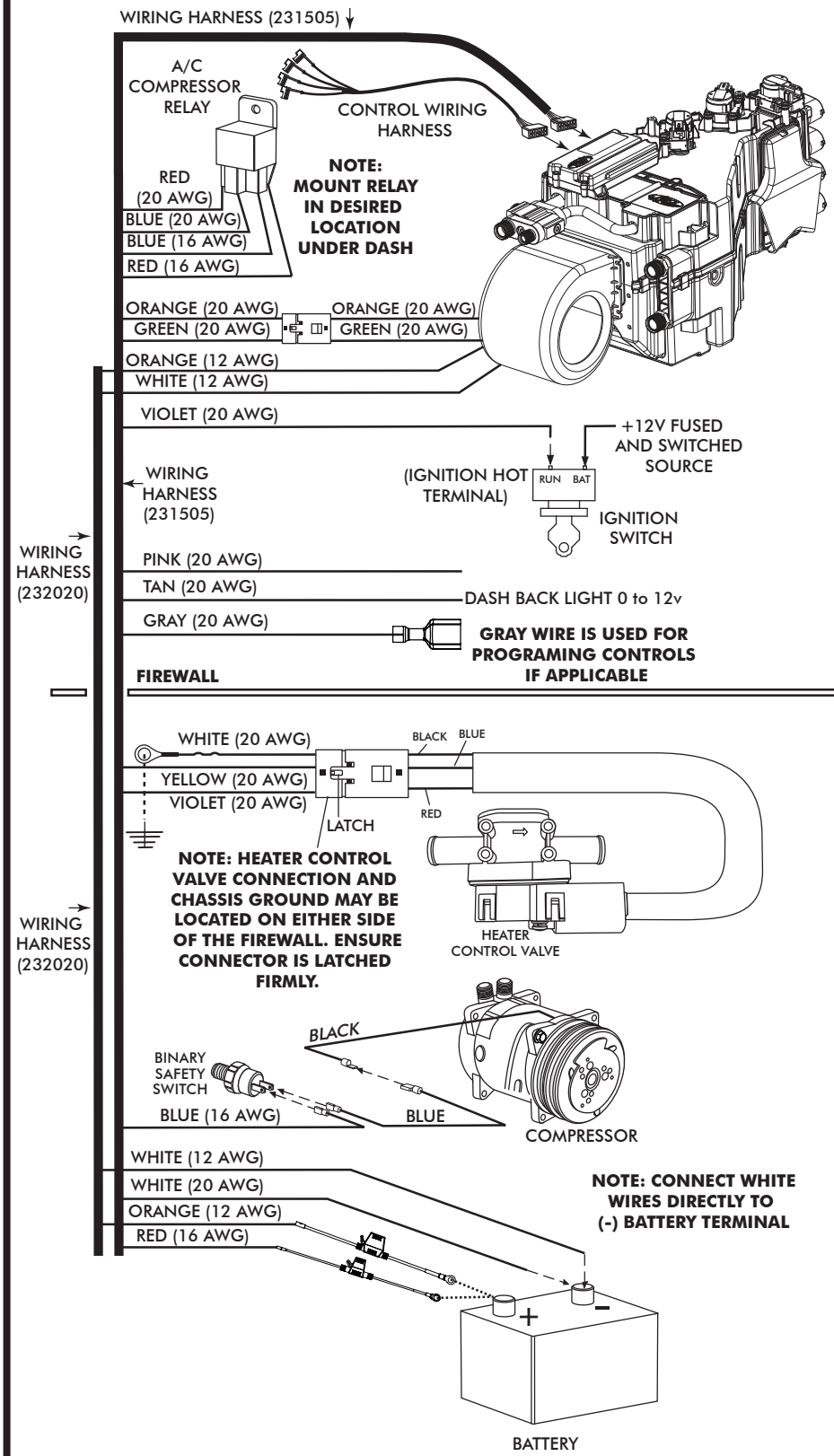


* Dash lamp (TAN wire) is used only with type 232007-VUR harness.

** Wide open throttle switch contacts close only at full throttle, which disables A/C compressor.

*** Install fuse assemblies at or as near to the battery as possible.

Gen 5 Wiring Instructions



Ignition Switch:
Using provided butt splice (PN 226004), connect the 20 AWG violet wire to a 5A fused and switched 12V source such as Key On.

Wide Open Throttle Switch (Optional):
If a wide open throttle switch is required, connect the 20 AWG pink wire to a normally open switch that, when closed, connects a fused and switched 12V source to the pink wire. See Gen 5 wiring diagram for an example.

Dash Light (Optional):
If using a Vintage Air control panel with back light, connect the 20 AWG tan wire to the vehicle's dash back light 0-12V using provided butt splice (PN 226004).

Heater Control Valve:
Connect the Violet/Yellow/White twisted branch with 3 position connector into the heater control valve connector. Ensure that the mating latch is fully seated.

Binary / Trinary & Compressor:
Binary Switch: Terminate provided insulated female terminal (PN 23172-VUW) to the blue 16 AWG wire. Connect as shown.
Trinary Switch: Connect according to trinary switch wiring diagram.

Battery Connections:
ECU Ground: Terminate provided ring terminal (PN 226110) to 20 AWG white wire from the 231505 wire assembly and install at battery.
ECU PWR: Terminate provided fuse assembly with black leads (PN 233012) to the 20 AWG red wire from the 231505 wire assembly. Install provided 10A Red Mini Fuse (PN 226118). Install at battery.
Blower Speed Controller (BSC) Ground: Terminate provided ring terminal (PN 226111) to 12 AWG white wire from the 232020 wire assembly and install at battery.
Blower Speed Controller (BSC) PWR: Terminate provided fuse assembly with orange leads (PN 233008) to the 12 AWG orange wire from the 232020 wire assembly. Install provided 30A Green ATO/ATC Fuse (PN 226125). Install at battery.

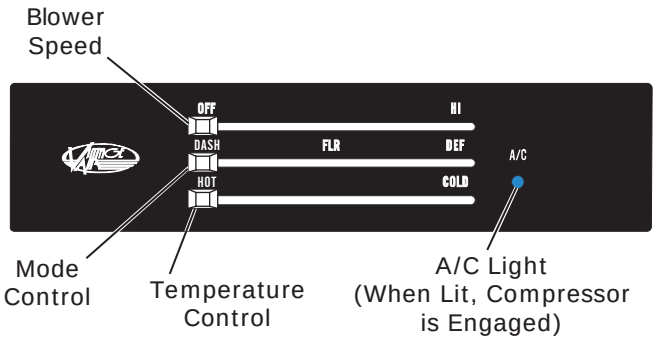
Operation of Controls

On Gen IV or Gen 5 systems with three lever/knob controls, the temperature control toggles between heat and A/C operations. To activate A/C, move the temperature lever/knob all the way to cold and then back it off to the desired vent temperature. For heat operation, move the temperature lever/knob all the way to hot and then adjust to the desired vent temperature. The blower will momentarily change speed, each time you toggle in and out of heat and A/C operations, to indicate the change.

Blower Speed
This lever/knob controls blower speed, from OFF to HI.

Mode Control
This lever/knob controls the mode positions, from DASH to FLOOR to DEFROST, with a blend in between.

Temperature Control
This lever/knob controls the temperature, from HOT to COLD.



A/C Operation

Blower Speed
Adjust to desired speed.

Mode Control
Adjust to desired mode position (DASH position recommended).

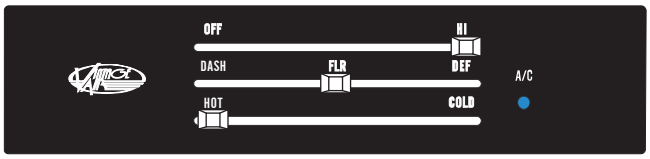
Temperature Control
For A/C operation, adjust to coldest position to engage compressor (Adjust between HOT and COLD to reach desired temperature).

Heat Operation

Blower Speed
Adjust to desired speed.

Mode Control
Adjust to desired mode position (FLOOR position recommended).

Temperature Control
For maximum heating, adjust to hottest position (Adjust between HOT and COLD to reach desired temperature).



Defrost/De-fog Operation

Blower Speed
Adjust to desired speed.

Temperature Control
Adjust to desired temperature.

Mode Control
Adjust to DEFROST position for maximum defrost, or between FLOOR and DEFROST positions for a bi-level blend (Compressor is automatically engaged).

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Troubleshooting Guide

This printed troubleshooting guide is our basic guide that covers common installation problems. To see our advanced diagnostics and troubleshooting guide, please refer to the following page for instructions on how to download the complete guide.

WARNING: While troubleshooting the system, never probe connector terminals from the front mating side, only back probe.

WARNING: While troubleshooting the system, never use automotive check lights.

Symptom	Condition	Checks	Actions	Notes
1. Blower stays on high speed with ignition on.	No other functions work.	Check for damaged pins or wires in the control panel wire assembly and mating header at ECU.	If found damaged, replace wire assembly or ECU.	
		Check for a bad ECU GND.		
	All other functions work.	Check for damaged pins or wires in the control panel wire assembly and mating header at ECU.	If found damaged, replace wire assembly or ECU.	
		Check if Blower power fuse is blown.	Replace fuse.	If fuse continues to blow, there is a serious problem in the wiring. Check all wiring and ensure the wire is not damaged and shorting out along its route.
		Check for a bad ECU GND.	Repair connection.	
2. Compressor will not turn on (All other functions work).	System is not charged.	System must be charged for compressor to engage.	Charge system.	**Danger: Never bypass safety switch with engine running. Serious injury can result.**
	System is charged.	Check for faulty A/C potentiometer or associated wiring (not applicable to 3-pot controls).	Check continuity to ground on white control head wire. Check for 5V on red control head wire.	To check for proper pot function, check voltage at white/red wire. Voltage should be between 0V and 5V, and will vary with pot lever position.
		Check for disconnected or faulty thermistor.	Check 2-pin connector at ECU housing.	Disconnected or faulty thermistor will cause compressor to be disabled.
3. Compressor will not turn off (All other functions work).		Check for faulty A/C potentiometer or associated wiring.	Repair or replace pot/control wiring.	Red wire at A/C pot should have approximately 5V with ignition on. White wire will have continuity to chassis ground. White/Red wire should vary between 0V and 5V when lever is moved up or down.
		Check for faulty A/C relay.	Replace relay.	

Troubleshooting Guide (Cont.)

Symptom	Condition	Checks	Actions	Notes
4. System will not turn on, or runs intermittently.	Works when engine is not running; shuts off when engine is started	Noise interference from either ignition or alternator.	Install capacitors on ignition coil and alternator. Ensure good ground at all points. Relocate coil and associated wiring away from ECU and ECU wiring. Check for burned or loose plug wires.	Ignition noise (radiated or conducted) will cause the system to shut down due to high voltage spikes. If this is suspected, check with a quality oscilloscope. Spikes greater than 16V will shut down the ECU. Install a radio capacitor at the positive post of the ignition coil (see radio capacitor installation bulletin). A faulty alternator or worn out battery can also result in this condition.
	Will not turn on under any conditions.	Verify connections on power lead, ignition lead, and both white ground wires.	Check for power at ECU, and confirm ignition is being applied to ECU properly.	
		Verify battery voltage is greater than 10 volts and less than 16 while engine is running.	Verify proper meter function by checking the condition of a known good battery.	
5. Loss of mode door function.	No mode change at all.	Check for damaged mode switch or potentiometer and associated wiring.		
6. Blower turns on and off rapidly.	Battery voltage is at least 12V.	Check for at least 12V at circuit breaker.	Ensure all system grounds and power connections are clean and tight.	System shuts off blower at 10V. Poor connections or weak battery can cause shutdown at up to 11V.
	Battery voltage is less than 12V.	Check for faulty battery or alternator.	Charge battery.	
7. Erratic functions of blower, mode, temp, etc.		Check for damaged switch or pot and associated wiring.	Repair or replace.	

Advanced Diagnostics and Troubleshooting Guide

If after referencing the Troubleshooting Guide, the issue is not resolved, move to The Advanced Diagnostics and Troubleshooting Guide that covers the following:

- **ECU Diagnostics Codes**
  1. ***ECU Blink Sequence***
  2. ***Firmware Version Number***
  3. ***ECU Model Number***
  4. ***ECU Start-Up Blink Sequence***
  5. ***Diagnostic Codes***
- **Complete Advanced Troubleshooting Guidelines**

Access the latest version of the Advanced Diagnostics and Troubleshooting Guide by scanning the following QR code on your mobile device:

You can also access the guide by typing the following address into your web browser:

https://www.vintageair.com/instructions_pdf/905000.pdf

www.vintageair.com

Packing List: Evaporator Kit (564285)

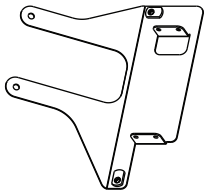
No.	Qty.	Part No.	Description	
1.	1	765200	Gen 5 Super Magnum Module	_____
2.	1	784285	Accessory Kit	_____

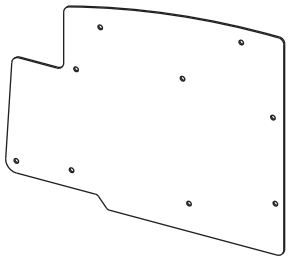
Checked By: _____
Packed By: _____
Date: _____

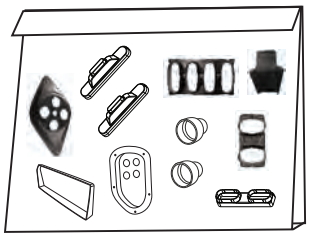
1

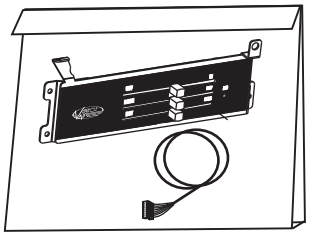
Gen 5 Super Magnum Module 765200

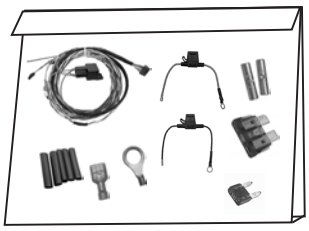
2

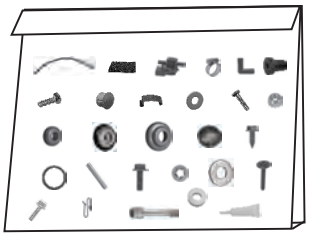












Accessory Kit 784285

NOTE: Images may not depict actual parts and quantities. Refer to packing list for actual parts and quantities.